<u>In the Claims:</u>

Please cancel Claims 2, 4, 7, 9, 12, 14, 17, 19, 23, and 25.

Kindly amend the claims as indicated.

      1.   (Currently Amended)   A method for queuing packets for transmission comprising:

          assigning each packet a first value;

          dynamically assigning each said packet a second value; and

          queuing each said packet for transmission using said first and second value,

          <u>wherein said first value comprises a sequence number S having a value of $S = (W + (T * D) >> scale)\%N$, wherein W is the sequence number of the last packet transmitted, T is a service factor, D is the size of each said packet, scale is a divisor for (T*D) factor such that S does not wrap around too quickly, and N is the range of sequence numbers.</u>

      2.   (Canceled)

      3.   (Currently Amended)   The method of claim ~~2~~1, wherein said second value comprises a real sequence number RS having a value of:

          if $(S < W)$, then $RS = (S + N)$;

          else $RS = S$.

      4.   (Canceled)

      5.   (Original)   The method of claim 3, wherein RS is dynamically computed.

      6.   (Currently Amended)   An apparatus for queuing packets for transmission comprising:

          means for assigning each packet a first value;

          means for dynamically assigning each said packet a second value; and

means for queuing each said packet for transmission using said first and said second value,

wherein said first value comprises a sequence number S having a value of $S = (W + (T * D) >> scale)\%N$, wherein W is the sequence number of the last packet transmitted, T is a service factor, D is the size of each said packet, scale is a divisor for (T*D) factor such that S does not wrap around too quickly, and N is the range of sequence numbers.

7. (Canceled)

8. (Currently Amended) The apparatus of claim ~~7~~6, wherein said second value comprises a real sequence number RS having a value of:

if $(S < W)$, then $RS = (S + N)$;

else $RS = S$.

9. (Canceled)

10. (Original) The apparatus of claim 8, further including means for dynamically computing RS.

11. (Currently Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method for queuing packets for transmission comprising:

assigning each packet a first value;
dynamically assigning each said packet a second value; and
queuing each said packet for transmission using said first and second value,

wherein said first value comprises a sequence number S having a value of S = (W + (T * D) >> scale)%N, wherein W is the sequence number of the last packet transmitted, T is a service factor, D is the size of each said packet, scale is a divisor for (T*D) factor such that S does not wrap around too quickly, and N is the range of sequence numbers.

12. (Canceled)

13. (Currently Amended)   The program storage device of claim ~~12~~ 11, wherein said second value comprises a real sequence number RS having a value of:

    if (S < W), then RS = (S + N);

    else RS = S.

14. (Canceled)

15. (Original)   The program storage device of claim 13, wherein RS is dynamically computed.

16. (Currently Amended)   A router comprising:

    a processor configured to assign each packet a first value;
    dynamically assign each said packet a second value; and
    queu each said packet for transmission using said first and second value, wherein said first value comprises a sequence number S having a value of S = (W + (T * D) >> scale)%N, wherein W is the sequence number of the last packet transmitted, T is a service factor, D is the size of each said packet, scale is a divisor for (T*D) factor such that S does not wrap around too quickly, and N is the range of sequence numbers.

17. (Canceled)

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18. (Currently Amended) The router of claim ~~17~~16, wherein said second value comprises a real sequence number RS having a value of:

if (S < W), then RS = (S + N);

else RS = S.

19. (Canceled)

20. (Original) The router of claim 18, wherein RS is dynamically computed.

21. (Currently Amended) A machine-readable medium including a packet to be routed, said packet further including at least a first value and a second value, wherein each said first and second values are used for queuing, wherein said first value comprises a sequence number S having a value of $S = (W + (T * D) >> scale)\%N$, wherein W is the sequence number of the last packet transmitted, T is a service factor, D is the size of each said packet, scale is a divisor for (T*D) factor such that S does not wrap around too quickly, and N is the range of sequence numbers.

22. (Currently Amended) The machine-readable medium of claim 21, wherein said second value is dynamically assigned.

23. (Canceled)

24. (Currently Amended) The ~~router~~ machine-readable medium of claim ~~23~~22, wherein said second value comprises a real sequence number RS having a value of:

if (S < W), then RS = (S + N);

else RS = S.

25.   (Canceled)